

## CLAIMS

1. A press-molding apparatus characterized by comprising:

(a) a first mold;

(b) a second mold disposed to face the first mold such that the second mold can advance and retreat, the second mold including a substrate, a heat insulating member disposed on a side of the substrate which side faces the first mold, and a machining member disposed on a side of the heat insulating member which side faces the first mold and having irregularities on a surface facing the first mold;

(c) a loading processing section for loading a to-be-machined member on the first mold;

(d) a heating processing section for heating the to-be-machined member to a molding temperature higher than a state change point of a material which constitutes the to-be-machined member; and

(e) a transfer processing section for pressing the machining member against the to-be-machined member so as to transfer the irregularities to the to-be-machined member.

2. A press-molding apparatus according to claim 1, wherein the heating processing section heats the to-be-machined member having been heated to a preheating temperature lower than the state change point.

3. A press-molding apparatus according to claim 1, wherein a heating section for heating the machining member is disposed between the heat insulating member and the machining member.

4. A press-molding apparatus according to claim 1, wherein a

heating section for heating the machining member is disposed between the first and second molds such that the heating section faces the machining member.

5. A press-molding apparatus according to claim 1, wherein a heating section for heating the machining member is incorporated into the machining member.

6. A mold to be disposed such that it can advance and retreat in relation to another mold onto which a to-be-machined member is loaded, the mold being characterized by comprising:

(a) a substrate;

(b) a heat insulating member disposed on a side of the substrate which side faces the second-mentioned mold; and

(c) a machining member disposed on a side of the heat insulating member which side faces the second-mentioned mold and having, on a surface facing the second-mentioned mold, irregularities to be transferred to the to-be-machined member.

7. A mold according to claim 6, wherein a heating section for heating the machining member is disposed between the heat insulating member and the machining member.

8. A mold according to claim 6, wherein a heating section for heating the machining member is incorporated into the machining member.

9. A press-molding method characterized by comprising:

(a) loading a to-be-machined member onto a first mold;

(b) heating a machining member to a molding temperature higher than a state change point of a material which

constitutes the to-be-machined member, the machining member being disposed to face the first mold such that the machining member can advance and retreat, disposed on a side of a heat insulating member which side faces the first mold, and having irregularities on a surface facing the first mold; and

(c) pressing the machining member against the to-be-machined member so as to transfer the irregularities to the to-be-machined member.

10. A press-molding method according to claim 9, wherein the to-be-machined member is heated to a preheating temperature lower than the state change point.